CLAIMS

1. A vertical shaft driving device wherein a plurality of rotary blades each including a blade supported on a planetary shaft are equally arranged circumferentially of a central shaft and capable of orbital motion integrally with said central shaft, and

wherein said rotary blades are arranged in a multipoint intersection form, in which blade faces of the blades are obliquely disposed with respect to radial directions with a center at said central shaft.

2. The vertical shaft driving device according to claim 1, further comprising: a cylinder section, in which said central shaft and said rotary blades can be rotated; and

a fixed vane section having a plurality of guide vanes, which are arranged around said cylinder section at regular intervals so as to straighten air flows or water flows and introduce them to said rotary blades.

3. The vertical shaft driving device according to claim 2, further comprising a plurality of arms, which are radially extended from said central shaft at regular angular intervals, said arms being rotated together with said central shaft,

wherein said planetary shafts are respectively provided to said arms, distances from said central shaft and said planetary shafts are equal, and the blade faces of the blades diagonally intersect the radial lines from said central shaft at a prescribed angle.

4. The vertical shaft driving device according to claim 2, wherein an inner end of said fixed vane section is located close to outer ends of the blades, which move in said cylinder section, so as to collide said rotary blades with a

fluid with high collision rate.

5. The vertical shaft driving device according to claim 2, wherein inner edges of said adjacent blades are separated each other in said cylinder section so as not to accumulate a fluid on the central shaft side.

6. The vertical shaft driving device according to claim 2, wherein a rectifying plate, which straightens and introduces a fluid to said rotary blades, is provided to said fixed vane section.

7. The vertical shaft driving device according to claim 2, wherein each of said rotary blades has: an upper circular disk, which is provided to an upper end of the blade; a lower circular disk, which is provided to a lower end of the blade; and a circular rectifying plate, which is provided in parallel to and between the upper and the lower circular disks and which is extended from both faces of the blade.

8. The vertical shaft driving device according to claim 2, wherein each of said rotary blades is formed into a shallow concave (small curvature) plate, whose curvature is smaller than that of a half-cylindrical blade of a paddle type vertical shaft wind mill so as to restrict colliding a fluid, which is introduced by said fixed vane section, with rear faces of said rotary blades.

9. The vertical shaft driving device according to claim 2, wherein each of the blades is formed into a flat plate and has a sub-flat blade, which is provided nonparallel on a rear side or a front side of each of the blades so as to form a nonparallel double plate, whereby generating a counter force, whose direction is opposite to a rotational direction, can be prevented, and total area of the blades can be broadened to improve efficiency of kinetic energy of a fluid.

10. The vertical shaft driving device according to claim 9, wherein each of the sub-flat blades is headed to make a passage section ratio, which is a ratio of a passage section of the fluid on a front side of the sub-flat blade to that on a rear side thereof, at a front edge equal to that at a rear edge.

11. The vertical shaft driving device according to claim 2, wherein each of the blades is formed into a shallow concave (small curvature) plate, whose curvature is smaller than that of a half-cylindrical blade of a paddle type vertical shaft wind mill, and has a sub-shallow concave (small curvature) blade, which is provided nonparallel on a rear side or a front side of each of the blades so as to form a nonparallel double plate, whereby generating a counter force, whose direction is opposite to a rotational direction, can be prevented, and total area of said rotary blades can be broadened to improve efficiency of kinetic energy of a fluid.

12. The vertical shaft driving device according to claim 2, further comprising a rotation control unit, which makes angles of the blade faces of the blades with respect to the radial lines, which are extended from said central shaft, large so as to reduce drag forces, which work to the blades and restrict a rotational speed of said rotary blades, when the rotational speed of said rotary blades exceeds a prescribed speed.

13. An electric generator being connected to said vertical shaft driving device according to claim 1, wherein a torque of said central shaft is transmitted to said electric generator.